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Application Analysis of Big Data Technology in Optimizing Administrative Service

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Abstract: In the environment of big data, government service is facing new challenges, but at the same time, it also come up for the opportunity of optimization and improvement. In order to better provide services for enterprise decision-making and promote the scientific development of government work, it is necessary to improve the quality of government affairs data. Therefore, for better catering for the demands of the times, it is necessary to analyze, process, judge and predict the information of government services with big data technology to optimize the government service model, and build a social governance model of co-construction, co-governance and sharing. Based on this, this paper explores how to better use big data technology to optimize government services, hoping to propose reference for relevant personnel and optimize the business environment.

Keywords: Big data technology; Government service; Application analysis

1. Introduction

The emergence of big data has brought important changes to various fields such as academia and government, which not only promotes the development of natural and social sciences, but also changes the production and lifestyle of human beings. Today, with the rapid development of economy and society, the country has entered the era of "big data", and a large amount of government data is growing at an exponential rate. This requires the government's government service work to keep pace with the times, apply big data to various work, and optimize the quality of government services through more advanced and efficient methods. As far as the application of big data in the daily work of government departments is concerned, there are still some areas that need to be optimized and improved.

2. Overview of Big Data Technology

Big data technology is a buzzword nowadays. Compared with traditional data processing methods,

its main characteristics are: First, the scale of data contained in big data technology is quite huge. With the vigorous development of network information technology, the number of digital information on the network is growing at a rate of several times, and its type and scale are also increasing rapidly. The second is the rapid processing capacity of big data. With the help of big data technology, the rapid processing of relevant data can be realized, and the required data information can be processed and obtained in a very short time, and finally it has high economic value. Big data can quickly discover valuable information and provide targeted services to users based on this information. The realization of big data is inseparable from the support of core technology, according to the research results of scholars at home and abroad, the key technologies of big data technology can be summarized and summarized mainly include: First, large-scale parallel processing database technology. It is a technology that can ensure the storage and processing of massive data, and the core is to perform the fastest operation on data processing instructions, while maintaining a low-latency read and write rate, thereby reducing the probability of failure of big data technology. The second is based on distributed database technology. Distributed database technology refers to the logical unification of the Internet with the help of algorithms according to the spatial attributes of the Internet, so as to form a huge database. The third is cloud-based computing technology. Cloud computing refers to the expansion of storage space by transferring computer storage and other functions to cloud terminals[1].

3. The Value of Big Data Technology in Optimizing Administrative Services

In the process of gradually shifting government functions from management to service, people's demand for the quality and efficiency of government services is getting higher and higher, and the number of government service projects is also increasing, and the business procedures are also becoming more and more complex. In some service projects, there are also cross-system, cross-regional, and cross-level problems, which make people often have to go through multiple departments or "run errands" many times when handling certain matters, which will affect

people's actual experience of obtaining government services, and then reduce people's satisfaction with government departments. The use of big data technology can effectively simplify the work process and realize the synchronous handling of online and offline business, so that the crowd can be diverted and the problem of waiting in line and running errands back and forth can be alleviated. In addition, big data technology can also collect and count information and data according to the demands of the masses, so that the problems and situations can be analyzed more accurately, and the optimization and active service of government services can be promoted. Through cross-level, cross-departmental, and cross-industry data sharing, government departments can have a fuller understanding and grasp of the needs of the masses, and solve all the demands and problems of the masses at one time[2]. It can be said that in the process of optimizing government services, big data technology can effectively promote the sharing and fast and accurate processing of information, greatly improve the work quality and work efficiency of government agencies, further improve people's satisfaction with government services, and truly do practical and good things for the people.

4. Specific Applications of Big Data Technology in Administrative Services

4.1. Data Processing of Government Affairs Based on Big Data Technology

With the deepening of the application of big data technology in government services, the e-government platform has also been established, which also makes more government services to be completed on the basis of the e-government platform, and the corresponding e-government platform is also accumulating a large amount of data information. Big data technology can automatically summarize and analyze a large amount of data information, which can not only improve the work efficiency of the e-government platform, but also improve the ability to accurately extract relevant data. For example, in the process of handling the business registration business of an enterprise, for a large amount of data submitted by the user, the relevant useful information can be quickly extracted by using big data technology, and a large number of data

analysis functions can be used to analyze the relevant information of the user in the shortest possible time, so as to make the most appropriate judgment.

4.2. Government Decision-making Based on Big Data Technology

Perfect information and data are the premise for government departments to make effective decisions, and the insight and predictability provided by big data can greatly improve the scientificity and accuracy of government decision-making. The introduction of big data technology into the e-government platform can effectively solve the problem of insufficient information exchange between regions, realize the sharing of government information resources, and provide a strong guarantee for the decision-making and deployment of government departments[3]. For example, according to the needs of the prevention and control of the novel coronavirus pneumonia, the e-government platform uses big data models to model and predict the prevention and control of the new coronavirus pneumonia, which provides strong support for government departments to better make decisions and deployments, thereby effectively improving the level of epidemic prevention and control in China.

4.3. Government Security Management Based on Big Data Technology

Due to the "double-edged sword" characteristics of the network itself, it is very easy to cause problems such as the leakage of personal information of the public, and even cause major security incidents. The application of big data technology to the e-government platform can provide users with security information protection, and network security defense technologies such as remote control system and data cleaning can be used to control illegal links, so that the operational security of the government affairs platform can be improved. For example, based on big data, build a mobile application management big data platform, collect data through self-monitoring and collection data, tool processing data, and third-party imported data, etc., collect data, and then clean and analyze, so as to continuously monitor the application market, official website, etc., obtain the latest applications, and detect risk vulnerabilities, viruses, illegal behaviors, *etc*. Regulators or enterprises can use the platform to monitor the release status of applications in the market in real time, and then provide reference for subsequent work plans.

5. Problems and Deficiencies in the Application of Big Data Technology in Current Administrative Services

5.1. Insufficient Data-sharing

Because government agencies are intersecting and independent in terms of functions and jurisdictions, many government agencies and departments do not fully share data and information, or only a small part of them are shared to a limited extent, resulting in an "island effect" that prevents the advantages of big data technology from being maximized. In addition, China's government information disclosure is not thorough, so that vulnerable groups cannot enjoy the "dividends" brought by big data. In particular, while emphasizing more information disclosure, the judicial and security departments are also refusing to share and publish data on the grounds of "confidentiality" and "privacy", and some have even opened up local area networks, making data sharing between various units and departments more difficult[4].

5.2. Uneven Development of Data

Due to the differences in the functions and financial security of different government units and departments, the application and development of big data technology in various government units and departments is also uneven, and the equipment of some units or departments can use the latest information technology to process data, but the facilities of some units or departments can only meet the basic office needs, and lack the hardware environment conditions for the application of big data technology.

5.3. The Rather Low Demand for Data Application

In order to achieve the task of optimizing the business environment, government agencies at all levels have tried to create data applications in the way of data sharing, however, they do not have much willingness to carry out process reengineering, because they have fully adapted to the original way of working, resulting in the application of data only on the surface, so that the use value of data has not been fully revealed, and the application effect of large data technology in

government services is not significant[5].

6. Application Strategies of Big Data Technology in Optimizing Administrative Service

6.1. "One-stop" Service to Improve the Efficiency of Government Services

Therefore, big data collection and extraction technology can be used to combine it with the basic information such as ID card and enterprise registration information submitted when the masses handle business, and automatically compare and extract the information and information that has been collected and saved by the relevant government departments, and input the relevant data and information of the person or enterprise who handle the business into the corresponding form or material, simplify the complicated procedures of the masses when handling business, and optimize the efficiency of government services.

6.2. Level Improvement of Government Services to Achieve "People-oriented"

At present, people's requirements for government services are becoming more and more diversified, and the specific requirements for government services are also different. The use of big data technology to analyze the government needs of the masses can better explore the needs of the masses in government affairs, so as to make a reasonable allocation of government resources. Of course, while promoting accurate services, big data prediction should also pay attention to the "degree", not over-predicting, let alone serving in advance, otherwise it will make the masses mistakenly think that their privacy has been infringed upon, which will have the opposite effect.

6.3. Analysis Strengthening of Administative Services & Design Optimizing of Decision-making

To optimize government services, we should not only be satisfied with providing people with high-quality government services every time, but should stand at the height of macro decision-making, optimize the overall deployment of government units, and promote the improvement of the efficiency of the development and construction of the whole society with scientific and rational decision-making and implementation, so as to effectively improve people's living standards and work

quality. To this end, government departments need to make full use of big data technology to refine and summarize valuable explicit and implicit information, and analyze and judge it, so as to provide data support for government departments to improve system construction and provide functional services.

7. Conclusion

To sum up, in the context of big data, for the all units and departments of government, the application of big data technology is not only an important means to improve specific work efficiency, but also an crucial part to promote the development of China's government from the traditional management mode to the new management mode of "deintervented, intervention-regulation-integrated, optimized service". Here and now or even further down the line, government departments should take effective measures to employ big data technology to government services in a earlier manner, innovate government services, improve their quality and efficiency, and strive for the integration, sharing and application of data and information, so as to provide better government services for the masses and in this way shall the society be prompted to prosper for the better.

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